

OUALCOMM Incorporated

5775 Morehouse Drive San Diego, CA 92121-1714 www.qualcomm.com

Via Email and Mail

February 23, 2018

Mr. Thomas Goode, ATIS General Counsel ATIS
1200 G. Street, NW
Suite 500
Washington, DC 20005
Email: patents@atis.org

RE: Updated and corrected commitment to previous disclosures made by Qualcomm Incorporated on June 25, 2015, October 3, 2016 and February 21, 2018

Dear Mr. Goode:

Our apologies for using the wrong form for our ATIS disclosures dated June 25, 2015, October 3, 2016 and February 21, 2018. Qualcomm hereby agrees that in addition to the promises and representations made in association with these three earlier disclosure forms, Qualcomm commits to the following statement for each of those earlier disclosures.

The Party submitting this Statement agrees that the patent holder (or party authorized to make assurances on its behalf) will, in any documents transferring ownership of patents subject to the assurance, include provisions sufficient to ensure that the commitments in the assurance are binding on the transferee, and that the transferee will similarly include appropriate provisions in the event of future transfers with the goal of binding each successor-in-interest. This assurance is intended to be binding on successors-in-interest regardless of whether such provisions are included in the relevant transfer documents.

Executed this 23 day of February, 2018, for Qualcomm Incorporated, by:

Michael Atlass, Sr. Director and Legal Counsel

Qualcomm Incorporated.

Please confirm receipt of this letter at your earliest convenience via email to my attention at ip.disclosure@qualcomm.com. If you have any questions or concerns, please call 858-587-1121.

Qualcom

Michael Atlass

Sr. Director, Legal Counsel

California Registered In-House Counsel



QUALCOMM Incorporated

5775 Morehouse Drive San Diego, CA 92121-1714 www.qualcomm.com

Via Email and Mail

June 25, 2015

Mr. Thomas Goode ATIS General Counsel ATIS 1200 G. Street, NW Suite 500 Washington, DC 20005 Email: patents@atis.org

RE: Patent Holder Statement on behalf of QUALCOMM Incorporated for ATIS-0700018

Dear Mr. Goode:

Please find attached Qualcomm Incorporated's Patent Holder Statement for ATIS-0700018.

Please confirm receipt of this Statement at your earliest convenience via email to my attention at ip.disclosure@qualcomm.com. If you have any questions or concerns, please contact me directly at 858-587-1121. Thank you.

Sincerely,

Thomas R. Rouse VP, QTL Patent Counsel Qualcomm Incorporated

TR/gg

ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS (ATIS) PATENT HOLDER STATEMENT

Please return via mail, email (scanned with signature), or fax to:
ATIS General Counsel
1200 G Street, N.W., Suite 500
Washington, D.C. 20005 USA
Fax: +1 (202) 393-5453

Email: patents@atis.org

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Neither ATIS nor any of its Forums or Committees shall be responsible for and expressly take no position concerning the information reflected in the form, or as respects the validity, enforceability or scope of any patented invention referenced in or identified in the form, or concerning the relevance or applicability of any such patented invention to an ATIS-developed American National Standard or other ATIS deliverable.

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No discussion or negotiation of license terms is permitted in any Forum or Committee. For further information regarding the licensing of any patented inventions identified in this Statement, please contact the person identified in Section B.

The Party submitting this Statement agrees that the owner (or party authorized to make assurances on its behalf) of patents that are the subject of this Statement will, in documents transferring ownership of such patents, include provisions sufficient to ensure that the commitments reflected in this Statement concerning the patents subject to this Statement are binding on the transferee, and that the transferee will similarly include appropriate provisions in the event of future transfers of such patents with the goal of binding each successor-in-interest. This Statement and the assurances contained herein are intended to be binding on successors-in-interest regardless of whether such provisions are included in relevant transfer documents.

A. PARTY SUBMITTING THE STATEMENT

Legal Name (e.g. XYZ Corp.): QUALCOMM Incorporated

B. CONTACT FOR LICENSING INFORMATION

Contact Name: Thomas R. Rouse	Title: VP, QTL Patent Counsel
Department: QTL	
Address: 5775 Morehouse Drive, San Diego, C	A 92121
Telephone: 858-587-1121	Fax: 858-651-0933
Email: ip.disclosure@qualcomm.com	1

C. ATIS-DEVELOPED AMERICAN NATIONAL STANDARD OR OTHER ATIS DELIVERABLE

Please complete a separate Patent Holder Statement for each standard/deliverable.

ATIS FO	orum/Co	mmittee:	WTSC
ATIS D	ocument	t Number:	ATIS-0700018
Title:			Capacity and Performance of TDMA-SC RTT
if appro	priate:	dentifiers*,	
*Note: If C	the stand ommittee	dard/deliverable and Issue num	information is not available, please provide available tracking identifiers (e.g., ber, working text number, contribution number).
D. LICH	ENSING	ASSURANC	CE
in accorda declares t	ance wit he follov	h Section 10.4 wing <i>(check b</i>	of the ATIS Operating Procedures, the Party submitting this Statement hereby ox 1, 2a, 2b or 2c and either box 3a or 3b):
] 1.	the use	of which wou	this Statement does not hold or does not currently intend holding any invention ld be required for compliance with the ATIS-developed American National IS deliverable identified in Section C.
2.	required delivera more pa	d for complian able identified articularly in S	this Statement may hold a patent covering an invention the use of which may be ce with the ATIS-developed American National Standard or other ATIS in Section C, and with respect to claim(s) of such patent(s), as may be specified section E, that are required for compliance with that ATIS-developed American other ATIS deliverable (check only one box):
	□ a.	demonstrably	le license will be made available under reasonable terms and conditions that are a free of any unfair discrimination, without compensation, to applicants desiring to ense for the purpose of implementing the American National Standard or other rable;
		compensation claim(s) of with the address identified	e if the Party submitting this Statement reserves the right to obtain ation from applicants who are only willing to license, for compensation, their of patents covering an invention, the use of which is required for compliance ATIS-developed American National Standard or other ATIS deliverable in Section C, on reasonable terms and conditions that are demonstrably free of r discrimination.
	or	CO 9900 € FF - Sherik Bodert-sati	
	■ b.	demonstrably	le license will be made available under reasonable terms and conditions that are a free of any unfair discrimination, with compensation, to applicants desiring to the ense for the purpose of implementing the American National Standard or other rable;
	or	Mark her	e X if such licensing assurance is subject to applicant reciprocity.
	□ c.	Is unwilling of	or unable to grant licenses according to the provisions of either 2a or 2b.

3. If the Party below):	submitting this S	Statement has c	hecked box 2a or 2b, please indicate	e whether (check a or b
i	nvention the use	nis Statement, of which is requirable identified	d for any claim(s) of any patent(s) or and which such Party has a right to l uired for compliance with the Ameri d in Section C, including the claim(s	license, covering an
C	overing an inven	tion the use of	d only for the claim(s) of the patent(s) which is required for compliance wible identified in Section C.	s) identified in Section E th the American National
selected. If D3	FION OF PATE b is selected, plea al sheets as neces	ase provide the	tion of the following information is a information indicated below for each	optional if D3a is h patent or application.
Patent No. or Application No. pending)		Status (Granted/ Pending)	Title	Relevance*
* Note: A Party m	ay, at its discretion	, provide further	information or explanation in respect o	f the invention's relevance
F. SIGNATURE	erican National Sta	ndard or other A	TIS Deliverable identified in Section C.	
Name of Authoriz	bly):		Thomas R. Rouse	9
Signature of Auth	orized Person:			
Title:			VP, QTL Patent Co	unsel
Date:			June 25, 2015	

For more information regarding ATIS' patent policy, please see Section 10.4 of the ATIS Operating Procedures (Version 4.0), which is available online at www.atis.org/atisop.pdf.

Please return via mail, email (scanned with signature), or fax to:
ATIS General Counsel
1200 G Street, N.W., Suite 500
Washington, D.C. 20005 USA

Fax: +1 (202) 393-5453 Email: patents@atis.org

Datont No or	Compter	C+-+	- 10-1-10-1	
Application No.	Commo	Status	IIII	Specification
(if pending)				
6,493,331	United States	Granted	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
2001249379	Australia	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
PI0109639-7	Brazil	Pending	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
2698363	Canada	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
2404055	Canada	Granted	A method of controlling transmission in a communications system using power back-off factors	ATIS-0700018
EP1269654	Germany	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
EP2237441	Germany	Granted	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
EP1901443	Germany	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
07024476.9	European Patent Convention	Pending	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
EP1269654	European Patent Convention	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
EP2237441	European Patent Convention	Granted	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
EP1901443	European Patent Convention	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
10184256.5	European Patent Convention	Pending	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
10184213.6	European Patent Convention	Pending	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
EP1269654	Great Britain	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
EP2237441	Great Britain	Granted	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018

Patent No. or	Country	Status	Title	Specification
Application No. (if pending)				
EP1901443	Great Britain	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
11108408.6	Hong Kong	Pending	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
11103458.6	Hong Kong	Pending	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
HK1119313	Hong Kong	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
08110421.0	Hong Kong	Pending	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
11108405.9	Hong Kong	Pending	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
ID0017078	Indonesia	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
197980	Israel	Granted	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
151705	Israel	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
207619	India	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
253586	India	Granted	A method for providing data transmissions to a plurality of receiver untis in a communications system	ATIS-0700018
5265727	Japan	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
2011-083932	Japan	Pending	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
4927288	Japan	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
10-0896156	Republic of Korea	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
10-0916166	Republic of Korea	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018

Patent No. or	Country	Status	Title	Specification
Application No. (if pending)				
229207	Mexico	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
332501	Norway	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
20111585	Norway	Pending	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
20111586	Norway	Pending	Method and apparatus for controlling transmissions of a communications systems	ATIS-0700018
2264036	Russian Federation	Granted	Method and device for controlling transmissions in a communication system	ATIS-0700018
91584	Singapore	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
NI-168386	Taiwan	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018
73979	Ukraine	Granted	Method For Controlling Transmissions (Variants), Method For Operating A Plurality Of Transmitter Units (Variants), Method For Providing Data Transmissions To A Plurality Of Receiver Units (Variants) In A Communications System	ATIS-0700018
6,744,743	United States	Granted	Method and apparatus for controlling transmissions of a communications system	ATIS-0700018